

Work Order ID 144703

April 22, 2016 9:52:28 AM

144703

Page 1

Item ID: D135-751-043 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: EC135 Replacement Wearplates for Standard Skid tubes Fit LH or RH
Start Date: 4/22/2016 Start Qty: 2.00 ***2*** Cust Item ID:
Required Date: 4/22/2016 Req'd Qty: 2.00 ***2*** Customer:
Reference:

Approvals: Process Plan: SLH Date: 20160422 Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____
Run Start ***NR1***
Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
IIN D135-751	Rev C								
100	Document Control	0.00							
100	DOCUMENT CONTROL								
DC	Memo	0.00							
Doc.Control -USB or Paperwork	Photocopy bluefile & type labels per PPP D135-751-043								
110	Pick Kit	0.00							
110									
Packaging	Memo	0.00							
Packaging									
120	QC4- 100% Inspect kits for completeness	0.03							
120									
QC	Memo	0.06							
Quality Control									

MLJ 1604-26

2x

DAS
8
9-89

APR 27 2016

2x

DAS
8
9-89

DAS
27
9-89

APR 26 2016

2x

DAS
28
9-89

APR 27 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																		
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																		
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																		
Large Fab ☐	Composite ☐	Supplier ☐																			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval																	
Description Work Order Deviation		Disposition		Completed By																	
				Lead hand / Supervisor Approval Verification																	
				QC / QA Coordinator Approval																	
<table style="width:100%; border: none;"> <tr> <td style="width:25%; vertical-align: top;"> Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ </td> <td style="width:25%; vertical-align: top;"> No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐ </td> <td style="width:25%; vertical-align: top;"> Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ </td> <td style="width:25%; vertical-align: top;"> FAULT CATEGORY Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ </td> <td style="width:25%; vertical-align: top;"> Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ </td> <td style="width:25%; vertical-align: top;"> Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐ </td> </tr> </table>					Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	FAULT CATEGORY Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐											
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	FAULT CATEGORY Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐																
OTHER : ☐																					

Work Order ID 144703

April 22, 2016 9:52:28 AM

144703

Page 2

Item ID: D135-751-043 Accept *N900040100* Setup Start *NS1*
 Revision ID: Stop *NS2*
 Item Name: EC135 Replacement Wearplates for Standard Skidtubes Fit LH or RH
 Start Date: 4/22/2016 Start Qty: 2.00 *2* Cust Item ID:
 Required Date: 4/22/2016 Req'd Qty: 2.00 *2* Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start *NR1*
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	Packaging	0.00							
130						2x	DAS 28 9-89	APR 26 2016	
Packaging	Memo	0.00							
Packaging	Identify and pack for shipping as per PPP D135-751-043								
	Location: <u>FG 128A</u>								
	PPP Rev: _____								
140	QC21- Final Inspection - Work Order Release	0.10							
140									
QC	Memo	0.20							
Quality Control									

MUS APR 27 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="width:12.5%;">Skid-tube ☐</td> <td style="width:12.5%;">Cross tube ☐</td> <td style="width:12.5%;">Water Jet ☐</td> <td style="width:12.5%;">Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																							
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																																																												
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																																																												
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																																																												
Large Fab ☐	Composite ☐	Supplier ☐																																																													
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																																																								
Description Work Order Deviation				Disposition				Completed By																																																							
								Lead hand / Supervisor Approval Verification																																																							
								QC / QA Coordinator Approval																																																							
Root Cause				FAULT CATEGORY																																																											
Environment ☐	Design ☐	Doc/Data ☐	Equip/Tooling ☐	Handling/Pre ☐	Material ☐	Internal Transport ☐	Tribal Knowledge ☐	LOA ☐	Substation ☐	Past Expiry Date ☐	Misidentified ☐	No Re-verification ☐	Operator ☐	Offset/Setup ☐	Supplier ☐	Training ☐	Use for Testing ☐	Poor Information ☐	Rushing ☐	Product Improvement ☐	Process Improvement ☐	Manufacturing Process ☐	Past Due ☐	Pressure/Forced ☐	Bending ☐	Centre Not Concentric ☐	Cracks ☐	Crimp/Kink/Ripple/Wave ☐	Cuffs ☐	Crushing ☐	Heat Treat ☐	Wave/Twist in Tube ☐	Marks/Chatter ☐	Temperature/Cure ☐	Set-up ☐	BOM/Route ☐	Broken/Damage/Defect ☐	Inspection Incomplete/Unqualified ☐	Contamination ☐	Countersink ☐	Cut Too Short ☐	Instructions Incomplete/Unclear ☐	Drill Holes ☐	Power Loss/Surge ☐	Folio/Program ☐	Grain ☐	Weld ☐	Wrong Stock Pulled ☐	Out of Sequence ☐	Off-set ☐	Mislabeled ☐	Fit/Function ☐	Misaligned/off center ☐	Positioned Wrong ☐	Outside Dimensions ☐	Over/Under tolerance ☐	Part Incorrect ☐	Part Lost/Missing ☐	Part Moved ☐	Drawing ☐	Finish ☐	Misread ☐	Turning Sequence ☐
OTHER : _____																																																															

Picklist Print

April 22, 2016 9:52:31 AM

Page 1

Work Order ID: 144703

144703

Parent Item: D135-751-043

D135-751-043

Parent Item Name: EC135 Replacement Wearplates for Standard Skid tubes Fit LH or RH

Start Date: 4/22/2016

Required Date: 4/22/2016

Start Qty: 2.00

Required Qty: 2.00

Comments: IPP Rev:A New Issue 06-12-18 JLM
13.12.11 ECN13-619/ CHG002 DD VERF:JLM

IPP REV:B

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
AN3C4A		Purchased		No		110	Each	931.0000	38	76			

AN3C4A

Bolt

Location	Loc Qty	Loc Code
FG	20	
122814	20	
FP001	223	
M133440	7	
M134396	41	
M134606	175	
OVER002	500	
M134502	200	
M134509	300	
ST350	188	
M134134	18	
M134396	170	

DAS BAS
6 27
9-89 9-89

DAS
28
9-89

D3512-041

Manufactured No

D3512-041

Wearplate

Location	Loc Qty	Loc Code
ST610	18	
142292	18	

DAS BAS
6 27
9-89 9-89

DAS
28
9-89

D4918-047

Manufactured No

D4918-047

Wearplate Aft

Location	Loc Qty	Loc Code
FP001	13	
143434	13	

DAS BAS
6 27
9-89 9-89

DAS
28
9-89

2

APR 26 2016

Picklist Print

April 22, 2016 9:52:32 AM

Page 2

Work Order ID: 144703

144703

Parent Item: D135-751-043

D135-751-043

Parent Item Name: EC135 Replacement Wearplates for Standard Skid tubes Fit LH or RH

Start Date: 4/22/2016

Required Date: 4/22/2016

Start Qty: 2.00

Required Qty: 2.00

D4918-1

Manufactured No

110

Each

10.0000

1

2

D4918-1

Wearplate Fwd

DAS
28
9-89

Location

Loc Qty

Loc Code

FP001

8

132158

8

FP002

2

119891

2

DAS BAS
6 27
9-89 9-89

D4918-3

Manufactured No

110

Each

3.0000

1

2

D4918-3

Wearplate Center Fwd

DAS
28
9-89

Location

Loc Qty

Loc Code

FP002

3

130442

3

DAS BAS
6 27
9-89 9-89

D4918-5

Manufactured No

110

Each

3.0000

1

2

D4918-5

Wearplate Center Aft

DAS
28
9-89

Location

Loc Qty

Loc Code

FP002

3

130443

3

DAS BAS
6 27
9-89 9-89

APR 26 2016

April 22, 2016 9:52:32 AM

Shop Packet Print

Page 2

Picklist Print

April 22, 2016 9:52:32 AM

Page 3

Work Order ID: 144703

144703

Parent Item: D135-751-043

D135-751-043

Parent Item Name: EC135 Replacement Wearplates for Standard Skid tubes Fit LH or RH

Start Date: 4/22/2016

Required Date: 4/22/2016

Start Qty: 2.00

Required Qty: 2.00

NAS1149C0332R

Purchased

No

110

Each

3,545.000

38

76

NAS1149C0332R

WASHER

DAS
28
9-89

Location

Loc Qty

Loc Code

APR 26 2016

DAS
27
9-89

FP001

1864

m132262

4

m132930

1004

m134063

728

m134073

128

GA

225

m133284

225

ST266

1456

m134474

456

m134574

1000

76

April 22, 2016 9:52:32 AM

Shop Packet Print

Page 3

5.0 PARTS LIST

Item	Qty -011	Qty -041	Qty -043	Qty -101	Part Number	Description
	X				D135-751-011	SKIDTUBE INSTALLATION
	1	X			D135-751-041	REPLACEMENT SKIDTUBE
			X		D135-751-043	WEARPLATE KIT
				X	D135-751-101	SKIDTUBE EXTENSION KIT
1		1			D3507-041	SKIDTUBE ASSEMBLY
2	4				**BRS8-96/48SZ-M8-W2	CLAMP
3	8				**LN9038-08032	SCREW
4		1			*D2965	CAP
5		1			*D2965-3	CAP
6		2			***AELS-1032-130	INSERT
7		2			***AELS-1032-225	INSERT
8		2			*AN3C5A	BOLT
9		2			*AN960C10L	WASHER
10		2			*AN526C1032-10	SCREW
20A		1	1		*D3508-1	WEARPLATE
20B		1	1		*D3558-1	GASKET
21A		1	1		*D3508-3	WEARPLATE
21B		1	1		*D3558-3	GASKET
22A		1	1		*D3508-5	WEARPLATE
22B		1	1		*D3558-5	GASKET
23A		1	1		*D3508-7	WEARPLATE
23B		1	1		*D3558-7	GASKET
24		38			*AELS-1032-130	INSERT
25	8	30	38		*AN3C4A	BOLT
26	8	30	38		*AN960C10L	WASHER
27	2		2		D3512-1	WEARPLATE
30		1			*AELS-1032-225	INSERT
31		1			*AN3C4A	BOLT
32		1			*AN960C10L	WASHER
40		4			*D3492-041	PLUG ASSEMBLY
41		4			***NAS1611-010	O-RING
42		2			*D3492-047	PLUG ASSEMBLY
43		2			***NAS1611-007	O-RING
44		4			*D3506-1	DOUBLER
45		8			*MS20601AD4W3	RIVET
46		2			*D3506-3	DOUBLER
47		4			*MS20601AD4W3	RIVET
48		4			*D3492-043	PLUG ASSEMBLY
49		4			***NAS1611-013	O-RING
50				1	D3510-041	INSERT ASSEMBLY
51				2	***AELS-1032-130	INSERT
52				6	***AELS-1032-225	INSERT
53				2	***ALS4-428-165	INSERT
54				2	AN4C7A	BOLT
55				2	AN960C416L	WASHER
56				2	AN3C4A	BOLT
57				8	AN3C7A	BOLT
58				10	AN960C10L	WASHER

* PART IS INCLUDED WITH D3507-041 SKIDTUBE ASSEMBLY

** TO BE SUPPLIED BY CUSTOMER, LISTED AS REFERENCE ONLY

*** DENOTES PART IS INCLUDED WITH ASSEMBLY ABOVE

• COPYRIGHT © 2006 BY DART AEROSPACE USA, INC. •

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.

Revision: C

Date: 07.09.20

PARTS LIST:

THE PARTS LISTS IN SECTION 32.9 OF ICA-D135-751 (PAGE 35) AND SECTION 5.0 OF IIN-D135-751 (PAGE 11) ARE AMENDED AS FOLLOWS FOR D135-751-011 @ CHG 002 AND LATER.

32.9 PARTS LIST (ICA-D135-751)**5.0 PARTS LIST (IIN-D135-751)**

DAS
28
9-89

Item	QTY -011	QTY -041	QTY -043	PART NUMBER	DESCRIPTION
	X			D135-751-011	SKIDTUBE INSTALLATION
	1	X		D135-751-041	REPLACEMENT SKIDTUBE
			X	D135-751-043	WEARPLATE KIT

IS:

20A	1		1	D4918-1	WEARPLATE (REPLACES D3508-1)
21A	1		1	D4918-3	WEARPLATE (REPLACES D3508-3)
22A	1		1	D4918-5	WEARPLATE (REPLACES D3508-5)
23A	1		1	D4918-047	WEARPLATE (REPLACES D3508-7)
27	2		2	D3512-041	WEARPLATE (REPLACES D3512-1)

WAS:

20A	1		1	D3508-1	WEARPLATE
20B	1		1	D3558-1	GASKET
21A	1		1	D3508-3	WEARPLATE
21B	1		1	D3558-3	GASKET
22A	1		1	D3508-5	WEARPLATE
22B	1		1	D3558-5	GASKET
23A	1		1	D3508-7	WEARPLATE
23B	1		1	D3558-7	GASKET
27	2		2	D3512-1	WEARPLATE

THE PARTS LIST FOR THE DSI 9661-011 KIT IS AS FOLLOWS:

QTY -011	PART NUMBER	DESCRIPTION
X	DSI 9661-011	WEARPLATE UPGRADE KIT
1	D4918-047	WEARPLATE
2	D3512-041	WEARPLATE

DESIGN	DW	DART AEROSPACE USA, INC KENT, WA	
DRAWN	DW		
CHECKED	<i>JP</i>	DRAWING NO.	REV. A
MFG. APPR.	<i>N/A</i>	DSI 9661	SHEET 2 OF 3
APPROVED	<i>JP</i>	TITLE	SCALE
DE APPR.		REVISED WEARPLATE KIT	NTS
DATE	13.08.21	COPYRIGHT © 2013 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	